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## LEADING ARTICLES

### THE EVOLUTION OF INFECTIONS.

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#### I. TYPHOID FEVER.

THE practical study of disease often leads to some interesting speculative considerations which, in their turn, may prove of indirect practical value. The present subject first impressed itself upon the writer during a visit to one of the mound builder earth works of Ohio. The particular earth work was a ring, just about a mile in circumference, open only for a comparatively few yards and, from archeologic evidence, once inclosing a village. This walled village had a moat but, as in quite a number of other similar cases, the moat consisted of a paved ditch inside the protecting ring of earth. From its depth, it was surmised that the ditch was an intramural water course serving as a primitive means of rapid transit. At any rate, here was an ancient village comparatively populous, without water supply except the surface water contained in this ditch, or obtained from shallow wells, for there were no springs, no natural stream except at a considerable distance, and no means of digging deep wells, or of piping water from a distance. Moreover, it was beyond credibility that the inhabitants of this village could have employed modern sanitary measures with regard to excreta.

The first thought suggested to a practical physician by the contemplation of such conditions, is typhoid fever, conveyed by water, flies and even personal contact. Yet, so far as can be judged from history, typhoid fever did not exist among the American aborigines until after European settlement and, indeed, typhoid was scarcely recognized as a diseae distinct from typhus, until well along in the nineteenth century. However, although not described as a distinct disease till less than a century ago, individual cases were reported at least as far back as the early part of the seventeenth century, in such clear terms as to be readily recognizable in the light of modern knowledge. Indeed, there is considerable reason to believe that typhoid existed in the practice of the Grecian and Roman medical authors, and that the ordinary lay conception of a fever, common to various European nations and extending through many centuries, represents typhoid fever more than any other febrile state.

To return to the mound builder village, if we conceive of its habitation at a period when typhoid was as much of an anachronism as electric lights—and, of course excluding also, cholera Asiatica—we find ourselves contemplating a sanitary Arcadia in which the law of sanitation as applying to excreta and water supply, might be violated constantly, with relative impunity. Unquestionably, in such a village, especially immediately after a rain sufficient to wash over the soil and convey filth into the intramural ditch, or during the hot, dry weeks of the summer, when the water was scant and when germ-life was rampant, there were periods of quite general diarrheal attacks, which might carry off the feeble, especially at the extremes of life, but which, for the majority of the population, hardy by virtue of out-door life, and without knowledge of alcoholic and other semi-toxic beverages, such as tea and coffee, passed off in a few days with very little mortality. A modern bacteriologist, translated like Mark Twain's Yankee, not into King Arthur's court, but into this mound builder village which may have been contemporary with the former, would recognize such diarrheal attacks as infections mainly with virulent colon

bacilli or other intestinal bacteria. Very probably, such epidemics presented the clinical signs of dysentery, and, indeed, it is perfectly possible that they were dysenteric in the sense of being due to bacilli closely related to or identical with Shiga's. The early observers of the Indians also describe death after colicky attacks, which can be identified with the "inflammation of the bowels" of our immediate predecessors and which we would now recognize as septic peritonitis due to inflammation of the appendix. "Appendicitis" is, of course, a form of sepsis, in which the colon bacillus is chiefly concerned.

In these days, in which the mildest symptoms of inflammation localized in the appendix are not only recognized, but often immediately followed by operation, and in which most of our cities and towns are somewhat guarded by sanitary precautions against typhoid, we have an exaggerated idea of the importance of appendicitis as compared with an artificially limited incidence of typhoid. But, in a hardy, out-door population, inured to the effects of coarse food and without the evil influence of alcohol and the xanthin-beverages, appendicitis would cause only an occasional death On the other hand, typhoid which our experience of the Spanish-American war has shown to be capable of involving practically every one in an infected camp not immunized by a prior attack, would decimate an Indian village, if occurring as an epidemic, and, as an endemic disease, would carry off 20 per cent of the total population by the time the reproductive period was well entered. Even at present, typhoid has a mortality of about 10 per cent and, if we imagine ourselves in a savage state, without knowledge of nursing, without milk—for none of our indigenous animals were capable of use as milch animals in captivity—and without utensils in which broths could be prepared or in which even cornmeal and wild rice—the only cereals which our aborigines possessed—could be freed from their coarse seed-coats, it is a conservative estimate that the typhoid death rate would be at least 20 per cent.

Let us see what data we have regarding the evolution of the typhoid bacillus. We may state with absolute confidence that this germ is at least 300 years old. In all probability, it is at least 1500 or 2000 years old. On the other hand, as this germ is incapable of reproducing itself indefinitely outside the body of a host, and as none of the lower animals is adapted to harboring it as a true, disease-producing parasite, it is obviously younger than the human race. From the scientific standpoint, it is immaterial what date we assign but, solely as a matter of popular interest, it may be stated that practically no one claims a greater antiquity for man than 100,000 years and practically no one a less antiquity than 10,000 years. Even the old-fashioned Biblical chronology assigns an antiquity of about 6000 years, and it is scarcely necessary to state that this chronology has simply been read into the Bible by a very literal addition of numbers collated from various parts of the Bible, and which are nowhere authoritatively taught by the Bible itself. Obviously, too, we may safely assert that typhoid has developed since the separation of the American race and, so far as the writer is aware, typhoid has not been described in African tribes except as it has been recently introduced from Europe. It would be idle to attempt to limit the time of the first appearance of the typhoid bacillus more closely, but, in the biologic sense, it is clearly a comparative recent organism.

It is interesting to inquire as to the ancestors of the typhoid bacillus and as to its biologic rank. It may be asserted almost positively that the typhoid bacillus is an evolutionary product of the colon bacillus. Evolutionists, for reasons that need not here be discussed, hold that instead of man being descended from the monkey, the monkey is a more primitive offshoot of a common ancestral type that has not been preserved. The colon bacillus, however, is common to so many mammals that we must regard it as an ancient germ, at least nearly as old as mammals and possibly even older. Thus, typhoid being a distinctly human disease, its bacillus is unquestionably derived from the colon bacillus quite directly and, indeed its cultural peculiarities, whether of form, chemism, or pabulum, place it in the colon group.

Quite recently, it has been discovered that certain cases of clinical typhoid, usually somewhat atypic, are due to a germ or germs intermediate between the colon bacillus and the typhoid bacillus. It is, as yet, impossible to state whether these so-called para-colon or para-typhoid bacilli differ essentially among themselves or whether their different agglutinative reactions are only such as we should expect from more or less transient variations. It may be said that these para-bacilli are colon bacilli in process of evolution toward true typhoid bacilli, or they may be regarded as atavistic typhoid bacilli, lapsing toward the type of the ancestral organism, or as modified colon bacilli tending toward a greater virulence and less permanent parasitism than the colon bacillus in its permanent form, but still entirely independent of the typhoid bacillus.

It is questionable whether a given species or even permanent variety can be evolved in more than one place and period. Some evolutionists have gone so far as to consider that even the different races of man, which are plainly only varieties—and hardly permanent varieties, but rather subvarieties of a single species — may have evolved from non-human species at different places and times in the world's history. But a more conservative view is that the natural conditions determining the evolution of a distinct species must have developed in a small inbreeding community, at one place, and in one relatively brief period, and that all members of a single species are descendants from this one community so that, once established, the species is, barring very insignificant variations, permanent—as permanent, in fact, as if we suppose it to have been supernaturally created in a moment of time. This view of the essential unity of a species rests upon the purely mathematic improbability that, in different places and times, there should have been exactly the same concurrence of the almost infinite number of circumstances that determined the evolution of one form of life into a specifically distinct form. Now, while it is more difficult to imagine so highly complicated an animal as man, or one of the other mammals, as having been evolved in practically identical form, at different places and times than to imagine a simple microscopic germ to have been similarly evolved at different places and times, a moment's consideration will show that if the typhoid bacillus is a distinct species, in the biologic sense, it is just as absurd to imagine a true typhoid bacillus to be evolved at present, as to suppose that the African, the Indian, the Caucasian and other racially distinct men were due to separate evolutions from only remotely related ancestral types.

Let us not deceive ourselves by verbal forms: When we write bacillus typhosus, it suggest that we have a genus bacillus and a species, typhosus. This is by no means necessarily a correct inference. It is hardly likely that all rod-shaped germs belong to one genus—no more likely for instance, than that all plants that have trunks and that we call trees, belong to one genus. In the latter case, we know that the different trees differ not only in genus but also in order and class. On the other hand, the bacillus typhosus may not represent a true species, although such appears to be the case. It may merely represent a permanent and well-marked variety of a larger and more inclusve species, just as the Northern Spy apple represents a well-marked variety of the species malus of the genus pyrus. But, even so permanent and characteristic a variety, can scarcely be imagined as subject to duplication by evolution.

Looking at the matter from the standpoint of disease, we can very readily imagine not only the bacillus typhosus, but various other evolutionary products of the colon bacillus, as well as the ancestral germ when temporarily increased in virulence, that is to say in its functional activities, including reproductive power, as capable of producing very similar reactions in the host, in other words, infections with the true typhoid bacillus, with various para-germs and with virulent colon bacilli, may all produce very similar symptoms, which may well confuse even an astute diagnostician, until he has recourse to agglutination and cultural tests. Even agglutination tests are not absolute indications of specificity.

Indeed, having the colon bacillus as a constant denizen of the intestine, occasionally capable of an exalted functional activity, and having man as a gregarious animal, so situated that colon bacilli of a heightened virulence may be transplanted to other individuals, and hence, in accordance with well-known and general bacteriologic principles, gaining in virulence at each transplantation into an individual without antitoxic resistance it is almost inevitable that some such specialized germ as the typhoid bacillus should evolve. A germ, like the colon bacillus, ordinarily subsisting upon the pabulum afforded by the intestinal contents may exist permanently within the alimentary canal. So long as its heightened virulence is purely transient, it is not likely to produce a particularly serious disease, although, with the assistance of septic germs or even unaided, this heightened virulence may, in individual cases be so serious as even to cause death. Yet, in the generality of cases, the exaltation of virulence will abate and matters will go on as before, the germ existing as an adventitious and harmless parasite. But, with the successive exaltation of virulence in the active evolutionary period, the germ becomes a true disease parasite of the human body and not a mere denizen of the alimentary contents. Such a parasite produces a reaction on the part of the host, such that permanent parasitism can no longer exist. One or other must be annihilated* If we assume a disease-germ to be evolved to such a state of virulence that the host must immediately succumb, a permanent disease could not be established for the germ, under such conditions, can no more exist outside the body of a host for a sufficient time to insure repro-

*This statement must be qualified by noting the occasional—perhaps rather frequent—occurrence of permanent immunization, so that a healthy individual may indefinitely harbor disease-germs, as of typhoid.

duction, than the host can exist with the fatal parasite in its midst. A disease-germ, in the proper sense of the term, implies two conditions: the host cannot permanently harbor the germ, and the germ cannot survive for long, outside the body of a host. We may imagine that the disease produced is inevitably fatal—and this condition is almost, if not absolutely fulfilled in the case of leprosy, glanders and several other diseases—but, at least, the host must survive long enough so that opportunity is afforded for the cultivation of the germ in the body of the host for several generations and for its transfer to another host. Conversely, the germ may survive for a considerable period—months in the case of the typhoid bacillus—in an extra-parasitic stage but a true disease-germ cannot thus survive indefinitely. Thus, every disease known or reasonably supposed to be due to a specific germ, has been handed down from one host to another, with only brief residence outside of the body of a host, from its first appearance to its latest.

In a disease like typhoid, which involves only human beings, the perpetuation depends upon the repeated transfer of germs from the excreta of one patient to the ingesta of another, and if we could stop this process, either by isolation of all patients or by disinfection of all discharges or by preventing the entrance of discharges into the alimentary canals of fresh victims for a year or two, typhoid fever would disappear from the face of the earth.

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WISCONSIN has a law requiring physicians to report accidents, as the state is desirous of classifying accidents. The statistician believes that physicians are very negligent in making these reports.

THE INTERNATIONAL ASSOCIATION OF THE MEDICAL PRESS.—A meeting for the permanent committee of the International Association of the Medical Press will convene at 11 Cavendish Square, London, on Saturday, August 3 next, the president, Prof. C. Posner, presiding. The American Association will be represented by three delegates. The following subjects are to be considered: 1. The material and moral situation of the International Association. 2. Report of progress from different national associations. 3. Relations of the medical press to the great medical congresses. 4. Preparations for the general assembly at Buda-Pesth. 5. Proposition in favor of Esperanto. 6. Medical journals and the protection of author's rights. And such other matters as may come up. The secretary of this meeting is Dr. Creasy, 51 Cavendish Square, London.

## PHYSICAL STIGMATA OF DEGENERATION.

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PHYSICAL degeneration is a morbid impairment of any tissue, fluid or organ, causing a reduction, or tendency, from a higher to a lower form.

This impairment is congenital. Its effect is to hinder the regular development of the tissue or organ, resulting in some malformation or stigma, which tends to separate the individual from his race, family or type. Such separation places the individual in an abnormal or pathological state of being, where in comparison with his immediate ancestors, he is weakened in the struggle for existence and tends toward eventual elimination.

### QUESTION OF ATAVISM.

Whether physical degeneration has to do with a regressive anomaly (atavism), or with a pathological lesion produced during the intrauterine period, or during the first days of infancy, is a question as difficult as it is important. Such an inquiry, however, would lead far beyond the purpose of this study.

Thus for instance, microcephaly may be regarded as an atavistic condition, in which the large brain has remained undeveloped. Too many fingers may be considered as an accidental division due to a simple original tendency.

An abnormal number of hairs on the body (hypertrichosis) might be regarded as a return to a lower type; or as a substitute for weakness of skin sensibility, which has not the power to push out the embryonic hairs.

### HOW VARIATIONS MAY PRODUCE STIGMATA.

It is well known that organisms through greater or less variation, can be eliminated or set outside of their species or family. These variations may be caused by changes in a single organ, which can produce an arrest of development, or lead to the highest development of the organ. Such an organ can be wholly stopped in its growth as the muscle which serves for the movement of the ear in man. Thus it is thought that the maxillary and sternoclavicular articulation is probably a reduced part of the skeleton; so the origin of the tendons has been explained. That is the muscle substance through different mechanical effects became weak, inflammation

* Senate Document, No. 187, 58th Congress, 3d session.

set in, then disintegration, leading to the formation of a scar or cicatrix; and this process was carried over to the whole mammal kingdom, making the ligaments as former tendonous parts of muscles.

PRODUCTION OF CRANIAL STIGMATA.

It is easy to understand how a microcephalic for simple anatomical reasons, would have a rudimentary mental life, but not so easy where the cranial volume is exaggerated. The volume is not however necessarily connected with the encephalic development. Certain affections may occur during gestation, or early infancy and give rise to inflammation, which causes eccentric pressure. The bones shape themselves according to the adjacent substance in the first period of life, resulting in an abnormal development, sometimes lessening, sometimes increasing the volume.

RELATIVE VALUE OF PHYSICAL STIGMATA.

All physical stigmata vary in their value as signs of degeneration. Those which are the most localized or superficial indicate less serious alterations of the nervous system. Thus the anomalies of the pavilion of the ear are frequent in normal persons.

Stigmata are more serious in proportion as they are more profound and more numerous. But as we rise in the scale of degeneration the physical signs lose more and more their importance are inconstant and more often absent and seem not to have any correlation with mental troubles. Thus in idiots, cretins and imbeciles physical stigmata are of more value, till we reach the superior feeble-minded, when psychological signs take presidence in significance. The stigmata of degeneration should be distinguished from deformities, coming from mechanical accidents of gestation, congenital amputations, etc. But they are not to be differentiated from certain pathological deformities due to diseases of the last period of gestation, or of early infancy.

We will now give what are regarded by leading authorities, as the physical stigmata of degeneration, as they appear in different parts of the body.

CRANIAL STIGMATA.

The slowness of ossification of the fontanelles is frequent in degenerates. Microcephaly is generally produced by an arrest of development of the cranium as a whole. Macrocephaly can be in the form of hydrocephaly. Macrocephaly is more often the consequence of defective development of the osseous system in general.

Malformations of the cranium considered pathological by some authors might be due to defects of development of the sutures. Plagiocephaly or an oblique cranium, can be the result of a lateral decubitus, or it can be produced by the premature ossification of the coronal sutures.

Scaphocephaly is due to a premature soudure of the sagittal suture, making a keel-shaped head, resembling a boat upside down. Acrocephaly (sugar loaf head) is due to the premature synostosis of the two coronal and sagittal sutures. Trigonocephaly is due to a premature synostosis of the metopical suture, having the form of a triangle.

The hairs near the vertex form a little turbillon or vortex (Fig. 1), which is rarely in the median line, but it seldom deviates more than 25 to 30 millimeters. In degenerates, these deviations may be much greater.

Fig.

The asymmetry of the volume of the cranium usually coincides with the asymmetry of the face, which is characterized by the different orbital capacity and by the unequal projection of the orbital arches and malar bones.

The exaggerated projection of the upper jaw and teeth is prognathism. The lower jaw may be large, as is claimed to be the case in criminals.

The presence of two round bosses (generally developed) is regarded as a symptom of hereditary syphilis. This is called naticephaly. Extreme prognathism can be accompanied with a depression of the root of the nose and a parting of the narines giving the appearance of bestiality with a similar physiognomy.

Another stigma is the lemurian apophysis of Albrecht which consists in the protecting of the angle of the jaw over its lower border

EAR STIGMATA.

The ear seems to have attracted special attention. There is the absence of pavilion with or without malformations of the middle and internal ear. But more often it is partial absence of pavilion. The lobe is sometimes wanting. The stigmata may consist in volume, the ear being too large or too small, or in its direction, as standing out prominently (Fig. 2).

Fig, 2.

The most numerous anomalies are found in the concha. The root of the helix, instead of rising from the base of the concha projects throughout the whole extent of the cavity dividing it into two cavities. The root of the helix may be doubled, or with the root of the antitragus may form two parallel projections, filling the cavity of the concha.

Sometimes the helix exists only in its ascending part; the outside border of the pavilion is wanting and the navicular fossa is more or less effaced. Often the ear without border is very large.

The Darwinian tubercle varies in its position on the border of the helix; sometimes it is double (Fig. 3).

The antehelix can be effaced or form a projection greater than that of the helix. The tragus is sometimes reversed, sometimes doubled.

If the concha is very deep with a small pavilion, the ear has the form of a comet. The lobe sometimes is wanting, as in monkeys. It presents numerous anomalies of volume and form. It may adhere to the cheek (webbed ear).

The form of the ear may vary with age.

EYE STIGMATA.

The eye can have prominent orbital arches. Sometimes the eyes are very near together as in the monkey, giving to the face some resemblance to a bird of prey. Sometimes the eyes are very far apart. The slit between the eyelids may be broad, leaving the eye uncovered, or it may be narrow so that the iris can scarcely be seen. This slit or fissure may be more or less rectangular, sometimes straight, or oblique.

The eyelids may be wanting, or adhere to each other, or to the ball of the eye.

The cartilages forming the palpebral framework may be undeveloped, taking away the support of the lids, and thus causing them to be soft, and in folds and resulting in a congenital entropion (inversion of eyelid). The conjunction may present a permanent vascularization, or an anomaly of a fold of the conjunction like a membrane over the eyeball, a sort of rudimentary third eyelid. One may observe colored spots, or certain vascular dilatations, or little pimples constituting congenital pterygion (hypertrophy of the conjunctiva).

The eye-ball may project out (pop-eyed), or sink into the orbital cavity and be hidden under the orbital arches and present a sickly or wild appearance.

Another degenerative stigma is an ophthalmia (imperfect development of the socket of the eye). This on account of its close anatomical connection with the brain may be concomitant with, or accompany general cerebral troubles. Sometimes there is a simple reduction or shriveling up of the eye.

The eye-ball may be especially hard and the intraocular tension exaggerated. This sort of congenital glaucoma is due to the same causes which provoke hydrocephalus and a hydro-ophthalmia.

Fig. 3.

Some of the malformations of the iris are congenital divisions more or less marked in its circumference, the colomba of the iris, or the iris may have several openings (policoria); or it may be pierced at its centre, so that the pupil is displaced (corectopia).

There may be a series of indentations in the circumference of the pupil (discoria), or there may be no opening or perforation (acoria). Sometimes the pupil is obliterated by a thin vail, there being defective resorption of the tissue. Another anomaly is the existence of many different colors on the surface of the iris, or absence of pigment presenting a white aspect in this region (albinism).

Asymmetry of the iris is a frequent stigma constituting congenital unequalness of the pupils.

STIGMATA OF THE NOSE.

The nose can be wanting entirely.

Some of the anomalies of the nose are a want of development in its bony frame called nasus aduncus, or excessive development, lateral deviations, absence of septum, atresia of the nasal fossa, asymmetry of the nostrils due to deviation of the septum.

Contraction of the nasal passages, causing troubles of breathing often influence the power of attention and through this the intelligence.

Another stigma is the depression of the root of the nose, or on the contrary the prominence or projection giving a vague impression of a horn implanted there. There is the flattening of the nose, the sinking in of the root; the end of the nose is raised up (snub-nose). The nose may bend to one side throughout its whole length or more frequently, the deviation is confined to the lower part. The nasal passages may be narrow. Here atresia is most often found. A nasal fistula may persist; or there may be hypertrophy of the vomer alone, which can impede respiration.

STIGMATA OF THE MOUTH.

The mouth can be too large or too small. The coincidence of congenital macrostoma (fissure of the lips) with fibroid cartilaginous preauricular tumors, indicates that these two stigmata are due to trouble of development of the first bronchial arch.

The lips can be too short leaving the teeth exposed as the incisors and canines forming a prolapsus; or too thick forming a sort of cushion on the front of the mouth (normal in negroes). Sometimes the lower lip is completely reversed forming an ectropion.

There may be also extrophy (turning out) of the upper lip; hare-lip, reminding one of certain rodents. Cleft palate often accompanies hare lip. The hare lip follows the deformities of the nose.

STIGMATA OF THE PALATE.

The palate may be asymmetrical, high and narrow, flat-roofed, horseshoe shaped and gothic.

The narrowness of the palate indicates an arrest in development of the upper jaw, involving often irregularities in the teeth. Sometimes the tonsils are absent.

The anomalies of the upper jaw, the palatal arch and the lips are interesting to consider in relation to the embryo of the chicken when one sometimes sees the malformations of the upper bill united with the malformation of the brain.

STIGMATA OF THE TONGUE.

The tongue can present an exaggerated or diminished volume, where in the latter case especially it is connected with difficulties in articulation. It may be too large for the mouth and so project out as in cretins.

Anomalies of form consist in asymmetry in the bifidity of the point of the tongue and of the median fissure of the upper surface, which coincide sometimes with the perforation of the palatal arch, velum and hare lip. One may note certain cysts at the base of the tongue and in the hyoidean region vestiges of the thyro-lingual canal.

STIGMATA OF THE TEETH.

The teeth may be undeveloped, or prematurely developed, where in the latter case, the first teeth may remain. There may be anomlies in number, volume, form, location and direction. A congenital absence of a certain number, even all in the lower jaw, may occur. The separation or disjunction of the upper and lower incisors should be mentioned.

The erosions of the teeth occur at the time of their formation, and are due to nutritional troubles. In hereditary syphilis the first large molar, in which calcification commences about the sixth month of fetal life, is the most frequently attacked; then came the incisors where calcification begins about the first month after birth.

The teeth are sometimes so extremely deformed as to be unrecognizable. They may be so large as to prevent the mouth from shutting, or so small as to be scarcely visible, or very irregularly implanted, or instead of pointing vertically up and down project forward or backward, or turn upon themselves, or appear as twisted upon their axis.

STIGMATA OF THE TRUNK.

In the neck there may be a goitre more or less developed, accompanying especially mental decay as in cretinism. Sometimes the thyroid gland is wanting.

The thorax may be much inclined forward; this stigma is often connected with scoliosis. The thorax may be greatly compressed laterally and the sternum projected forward; or there can be simple thoracic asymmetry; the

thorax may be funnel-shaped. One part may be more developed or differently and unequally developed than the other. There may be depression at the xiphoid (sword-like) appendix, or the borders may be more or less abrupt causing a thoracic and abdominal malformation. There may be a vertical depression extending its whole length like a groove. The volume may be out of proportion to the abdomen. The thorax may be flattened in its different diameters. The shoulders may droop. An arrested development of important muscles may bring to light the embryonic origin of certain malformations. Among epileptics there is frequently a hyperostosis of development at the external extremity of the clavicle.

In the vertebral column there may be a prominence of the spinal apophyses with a contour resembling that of the monkey. Or there may be deviations of the column, as kyphosis, lordosis, scoliosis; or the spina bifida. There may be a malformation of the coccyx like a rudimentary tail suggesting an atavistic regression.

The pelvis may be narrow, flat and deformed. The breasts may be supernumerary, occupying the latero-mammal, hypogastric or inguinal regions. The supernumerary breast is often a simple nipple, which in turn can be the seat of numerous anomalies.

### HERNIAS.

Hernias are frequent in degenerates, all hernias are due to an arrest of development of the abdominal wall, the traces of which are sometimes found in a normal state in animals near to man. Extreme weakness of the abdominal walls is considered as an anomaly in all races.

### THE MEMBERS.

The anomalies in arms, hand, legs, and feet are those of form and proportion Supernumerary fingers (polydactyly), webbed fingers (syndactyly), absence of fingers (extrodactyly) are important anomalies of form. Those of proportion may consist in the arms being too short, or too long (most frequent). In the latter case the span of arms or length of reach is notably greater than the height. Similar disproportions are observed in the lower members. When the legs are too long they are often slender, making the individual resemble a wading bird, a characteristic of infantilism and of the eunuchs. Excessive development in length of legs is observant not only in neurotic degenerates, but in consumptives. When the limbs are too short, they are oftener very thick.

The fore-arm, as compared with the arm, is very long as is normal in lower races.

In epileptics there is a congenital malformation of the ulna.

### STIGMATA OF THE HANDS.

The thumb has a double nail. Disproportions of fingers and toes are to be noted (Figs. 4, 8). There may be an absence of a phalanx of a finger, a union of two phalanxes, a short metacarpal or metatarsal; or many fingers may be short. Disproportion of the fingers can be very marked. The fingers are compared in length with the middle finger. Thus in the normal hand, the index

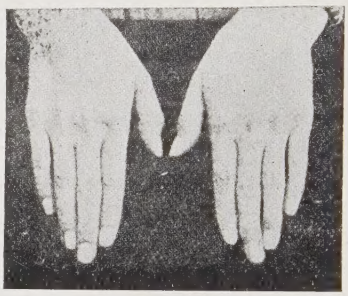

Fig. 4.

finger reaches to where the nail emerges from the middle finger, the ring finger reaches to about the middle of this nail; the little finger stops at the last articulation of the ring finger; the middle finger is longer and larger than either the index or ring fingers. In the abnormal hand of degenerates, all the fingers are often too long or too short. The shortness is more common in profound degeneracy. The most common anomaly is defect in proportion of one or many fingers. Most often the ulnar border of the hand (Fig. 5) is defective; the little finger and the ring finger are too short, or the ring finger has not its normal length compared with the middle finger, while the little finger maintains its proportion to the ring finger. Or the little finger is too short in

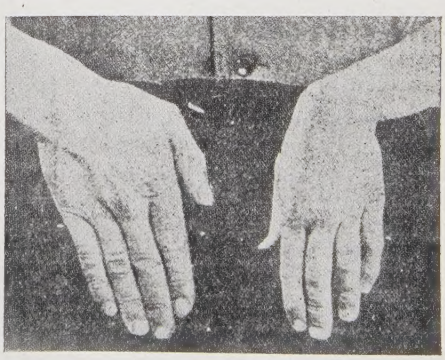

Fig. 5.

comparison with the ring finger, already too short. The defect of the little finger is made still more marked where its second phalanx is bent, resembling the little toe. The third phalanx of the little finger may bend towards the ring finger.

Sometimes the ring and little fingers are not only short but very slender; this defect sometimes is accompanied with very marked weakness of the two last fingers, normally more feeble and particularly troublesome for pianists.

The thumb is most often too short, due to the small development of its little phalanx.

The decadent hand in connection with defective ears and eyes may be significant. Sometimes all fingers, except the thumb are united together into one piece, called the claws of the lobster.

### STIGMATA OF THE TOES.

Most of the anomalies of the fingers appear in the toes (Figs. 6, 8). If the second toe be shorter than the first, this may be due to

Fig. 6.

the shoes, since it is not the case with ancient peoples. In epileptics the predominance in length of the second toe occurs in 45 per cent, while in people in general it is 10 per cent. Hammer-like toes and lateral deviations of toes are frequent in degenerates. The infantile foot, where the toes tend to be uniform in length, is found in idiots and imbeciles. There is the club-foot, considered by some as the result of evolution trouble, but by pathologists as the consequence of medullary lesions. Sometimes club-foot is coincident with defective knee-pan, polydactyly and absence of great toe. Deviation outward of great toe (hallux valgus) can be considered as an anomaly of development.

Sometimes club-foot is due to injuries of pregnancy. Flat foot appears to be more frequent in degenerates than in normal people.

Excessive volume (meglomelia) or excessive meagerness (oligomelia) of the members quite frequently are anomalies of development.

The thinness of the members is often attributed to the want of exercise, but one finds this as well in children of the alcoholic workman, as in those of the aristocracy, degenerated through other vices, or simply by defective crossing in marriage.

Anomalies of articulation, congenital dislocations of the shoulder, absence of knee-pans, articular laxity, congenital ankyloris

Fig. 7.

lateral deviations of the articulations and knock-knee (genu valgum) are stigmata of degeneration.

### STIGMATA OF THE GENITAL ORGANS.

In general sexual characteristics tend to be changed and effaced, and differences between the sexes become less marked in degenerates.

Insufficient development of genital organs is noticeable. Excessive development is usually due to morbid habits or pathological alterations.

The testicles may be very small (micro-orchides) or there may be inguinal or abdominal ectopia, morbid displacement, the different inversions, varicocele, or cysts of the epididymis.

Fig. 8.

There may be atrophy or hypertrophy of the penis; or swelling at its lower extremity, found mainly in mastibators. There may be orsion on its longitudinal axis, or a tendency of the orifice of the meatus, to be doubled or present fistula, or the organ may

be imperforated or too narrow, or bent down (hypospadis) or up (epispadis). The prenum is frequently short, and thus may impede coition and fecundation. The prepuce can be wanting, too long, or too narrow, constituting congenital phimosis. The penis can be united to the scrotum by a fold of the skin, forming a sort of vail, like to the membrane in webbed fingers.

The scrotum, in certain degenerates, has a median fissure, a vestige perhaps of arrested embryonic development.

In woman, the labora may be large, simulation a scrotum; a large clitoris can have the appearance of the male organ. Imperforation of the vulva, transverse or vertical closing or partitions of the vagina and doubleness of its external passage, all these may be present.

There may be congenital atresia of the vulva rendering coition impossible, and absence of vagina or hymen.

### DIFFERENCE BETWEEN THE SEXES.

Certain degenerative stigmata unite in one individual the attributes of both sexes. At the end of the embryonic life the embryo is neutral and we cannot say to which sex it belongs. The differentiation begins later.

In the general conformation of the body irregularities appear, such as masculinism, feminism, infantilism, androgynism and hermaphrodism.

### MASCULINISM.

Masculinism refers to an individual possessing the fundamental sexual characteristics of a woman, and at the same time certain secondary sexual characteristics of the masculine type, as the development of hairs over the body, small breasts, narrow pelvis, etc.

The masculine woman's head has somewhat similar measurements to the men's, and is much larger than in woman.

The shoulders may be large and pelvis and breasts little developed, there is a strong voice, masculine gait and taste for man's vigorous exercises and habits, and little inclination to feminine pursuits.

### FEMINISM.

Feminism in man on the other hand is characterized by masculine genital organs, little developed, feminine attitude and gait, large pelvis, prominent hips, breasts of considerable size, abundance of subcutaneous fat, delicate skin, covered with few hairs, soft voice, morbid emotion and no sexual desires or perverted ones.

### ANDROGYNISM.

But there are individuals with only a partial inversion of sex, called androgyns, who are not wholly hermaphrodites. The male or female androgyn shows defect in harmony between the accessory characteristics of the pelvis and hips, breasts and hairy system.

The male androgyn has a large pelvis and developed breasts and no beard. The female androgyn has a narrow pelvis and a little mustache. But these types are distinguished from masculinism and feminism, in that, while the feminine man has large shoulders, the masculine woman has narrow shoulders.

### INFANTILISM AND NANISM.

Infantilism is a physical youthfulness manifesting itself only at a certain age of adolescence; there is a retardation of development principally in the organs furnishing the fundamental or accessory characteristics of sex.

Nanism on the other hand is defect of general development. One sees very tall youths who hold the characteristics and trait of infancy, until adult life. This is due to incomplete development of puberty.

Female infantilism is characterized, not only by little development of uterus, ovaries and breasts, but also by complete absence of pubic hairs.

In infantilism the development of the hairs upon the skin is defective. The hair of the head remains fine and downy, the nails are very thin; the milk teeth remain, and second dentition develops slowly, as do the genital organs and voice. All infantiles, whatever their physical development, are intellectually backward.

### SKIN STIGMATA.

Certain varied colorations of skin are seen ranging from rose to dark red or violet or chocolate brown. Such are the different noevi due to dilatation of the superficial capillary vessels. Vetiligo, due to pigmentary trouble, may be mentioned; also melanism (change in coloration) albinism and ichthyosis.

There is a frequence of symmetry in the arrangement of the papillary lines on the pulps of the fingers and thumb and a relative frequence of most simple forms.

The hair of the head and hairs on the skin, throughout life may have a languid appearance, an extreme fineness, like on the newly born child. In both sexes the hairs can be rare and little developed over the parts where they appear at the time of sexual evolution. In the man, hairs may be wanting on the face and chest (feminism), in woman they may reach some development in these regions.

The development of the hairy system in woman may be regarded as a regression.

There may be a complete coloration of skin (albinism), or a partial coloration (vitiligo). Or there may be abnormal and superabundant hairs over all the body (polytrichosis) or over certain parts as the lumbar region, or lower limbs (hypertrichosis).

The anomalies of the nails, especially when very thin or in a fetal condition, or absence of nails may be regarded as stigmata.

FUNCTIONAL STIGMATA OF DEGENERATION.

Arrested, retarded or anomalous functions may be regarded as stigmata. Slowness in learning to walk which appears to be connected with retarded evolution of the pyramid is a stigma.

ANOMALIES OF SPEECH.

Defects of speech are stuttering, stammering, speaking through closed nose, open nose, lisping, deaf-mutism, dullness of hearing.

Defects of speech increase with age. Very few children acquire defects of speech in later life. The majority of children with such defects are backward in mental development.

Stigmatism or defective enunciation of sibilants may depend upon hereditary abnormality of location of teeth.

Bradylalia (slow and labored speech) exaggerated rapidity of speech, embololalia, anomalies of voice and nasal sounding voice are stigmata.

ANOMALIES OF MOVEMENT.

Anomalies of movement are tics, tremblings, nystagmus (rotary movement of eye) retardation or absence of regulation of certain reflexes, incontinence of urine, merycism (rumination) which is sometimes hereditary and often manifested by the insane and idiots and in those predisposed to epilepsy and hysteria. Pavy disease and cyclic albuminuria are stigmata.

ANOMALIES OF GENITAL FUNCTIONS.

The anomalies or stigmata of the genital functions are retardation of puberty, of sexual instinct and appetite, genital reflexes and seminal losses.

In degenerate families the stature varies more or less, often tending to nanism in the boys and gigantism in the girls.

The anomalies of menstruation, menstrual deviations, and especially total amenorrhea indicate uterine and ovarian anomalies. Habitual miscarriage is often connected with uterine malformations and uterine infantilism. Absence of lactation indicates also anatomical anomalies, especially insufficient development.

Congenital sexual perversions and especially sexual inversion are stigmata.

SENSORY ANOMALIES.

Sensory anomalies are daltonism (color-blindness) ackromatopsia (complete color-blindness) nyctalopis (day blindness), indicating anomalies of structure.

Defects in acuteness of sensibility, as analgesia and disvernerability are stigmata.

Anamolies of sleep are insomnia, somnolence or prolonged need of sleep and narcolepsy (attacks of sleep).

VASO-MOTOR ANOMALIES.

These are morbid emotions, as explosiveness, often connected with exaggerated reflexes; tendency to blush for the least cause, often on only one side of the face. This may be considered a vascular anomaly of the skin, and is often hereditary.

Vasomotor reactions present frequent variation of temperature in degenerate children, and intense reaction upon slight physical trouble. Susceptibility to eruptive fevers, marked taste for excitants, drooping of the upper eye-lid and rotation of the pupil downward are signs of degeneration.

Left-handedness, a congenital aptitude, infantile symmetry of all movements (synkinesia), the disease of von Wayenburg and a tendency to hemorrhage are stigmata.

One of the most frequent functional stigmata is incapacity of sustained effort.

POST-MORTEM STIGMATA.

There are doubtless a very large number of stigmata hidden during life, which might be brought to light at the autopsy table. They are the congenital malformations of the internal organs. There would be however, great difficulty in distinguishing that which is congenital from that which is due to pathological troubles during different periods of life.

Some visceral anomalies as inversion of the viscera, anomalies of the heart (cyanosis) and its vessels, ectopic (morbid displacement) of the kidney, spleen and uterine deviations due often to arrested development of walls, might be regarded as stigmata. Some consider moving kidney which otherwise may coincide with other anomalies, as a stigma of degeneration. Certain formations of congenital origin, as paraovarian cysts, tumors of Rosenmuller's organ, cysts of Gaertner's canal and dermoid cysts of the ovary may be considered as stigmata.

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Blood lost at stool in the form of a jet is practically always from a hemorrhoid.

## THE SURGICAL REDUCTION OF THE EXCESSIVELY LARGE EAR.

CHARLES C. MILLER, M. D.

CHICAGO, ILL.

EARS of excessive size disfigure greatly, particularly, when they are set at an angle of more than thirty degrees to the side of the cranium.

Considerable care must be exercised in selecting the operation for reducing the large ear, for unless operative traces subsequent to the operation are slight, and inconspicuously placed, and the general outline of the ear is natural the reduction may not improve the appearance.

A certain advertiser who collects his fee in advance infiltrates these ears along their margins, and then trims them down with scissors in much the same manner that an accommodating grocer's clerk will bob the ears of a fox terrier. I suppose he derived his inspiration from such source, but unhappily the subject is one too serious to be spoken of lightly for the patient who has been so treated is disfigured for the remainder of his days.

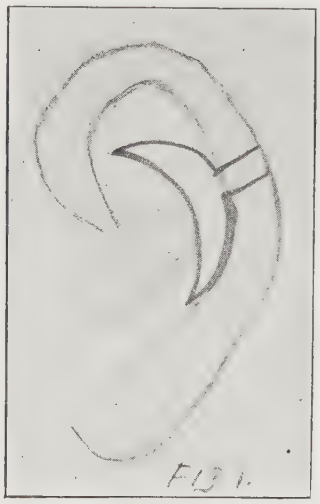


FIG. 1. Outline showing crescent-shaped excision.

There is a demand for men capable of performing operations intended to improve the appearance, and in the regular profession I believe this is the only special field which is not overcrowded. So far as I can learn I have the world to myself in this respect, and am the only surgeon who performs any considerable number of operations which may be used for improving featural defects. Of course the general surgeons give attention to the subject in a most superficial and cursory manner and at more or less remote intervals perform certain of the generally known operations.

The discouraging complications following the furore over paraffin injections squelched a number of promising candidates for fame as featural surgeons, but with the description of several dozen featural operations which are simple, successful and almost invariably uncomplicated I believe the general profession may be stirred to take an interest in this field of surgery, and before many years we will have in every city of the first-class surgeons who give their attention in large part, if not exclusively, to this class of surgery.

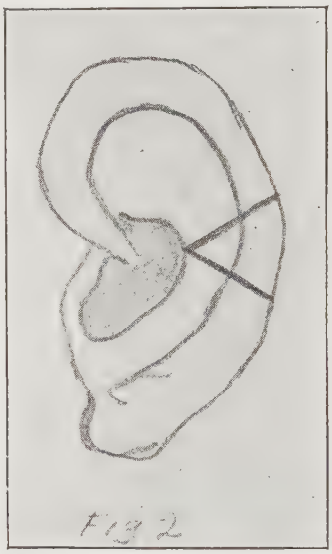


FIG. 2. Illustrating the triangular excision.

Several methods have been described for reducing the excessively large ear, but as they are all objectionable from one or another standpoint, I believe that surgeons will find what I term my posterior sickle operation superior. The advantage of this operation is that it reduces the size of the ear and alters its general appearance less than the other operations described and at the same time absolutely no scarring is caused of the anterior surface of the ear.

The simplest manner of reducing the undue size of the ear is by the excision of a triangular segment and suturing of the interval left. A second operation includes the removal of a crescent followed by suturing. I do not remember whether this is an operation which I originated or not, and am too indifferent to ascertain by a search of the literature. The third and most satisfactory operation includes the removal of a sickle-shaped

portion of the ear, leaving the skin over the anterior surface of the ear, and removing only the cartilage and the skin posteriorly. This operation I have not seen described elsewhere, and while it is possible I have been anticipated the matter is entirely inconsequential.

To perform any of these operations infiltration is all that is required to render the operation painless. This is accomplished with a very weak cocain solution.

The operator turning the ear forward marks off with a sharp scalpel, the portion of tissue which he expects to cut away. The skin is cut through down to the cartilage and then the cartilage must be cut through with care so that the skin over the anterior surface of the ear is not punctured. Scissors, scalpel or small sharp biting forceps may be used for cutting away the cartilage, and the operator must be careful in cutting away this dense tissue from the closely adherent skin that the skin is not buttonholed or ripped.

Bleeding should be controlled before the parts are sutured and then stitches may be taken which pass through skin and a portion of the cartilage or the skin alone may be closed by sutures. If the sutures are made

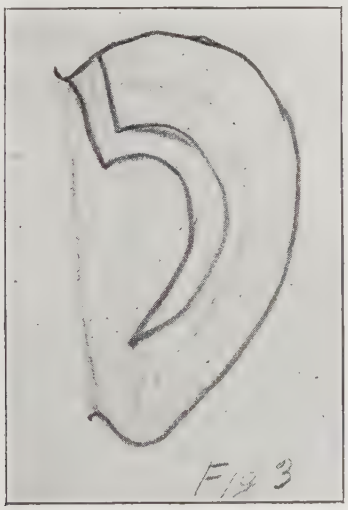


Fig. 3. The sickle-shaped excision, which should be performed posteriorly without sacrifice of the skin anteriorly.

to bite into the margin of the cartilage on either side before emerging through the skin a stability is given to the parts which is not otherwise obtained.

The operator should also remember to correct the outstanding, and where this is not marked the ear may be dressed closer to the side of the head after the sickle operation. Should the ears outstand to a marked degree the regular operation for correcting this condition should be practiced.

The ear usually becomes swollen after these operations, and tingles and burns somewhat as though it had been frosted, but these symptoms subside in a few days, and no other unpleasant after-effect or complication need be feared.

70 State street.

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At the meeting of the Richmond (Va.) Academy of Medicine and Surgery, June 25, plans were considered toward procuring a permanent home for the Academy.

Dr. Arthur Hitchens, director of the antitoxin and vaccine laboratories of the H. K. Mulford Company is in London engaged with Prof. E. A. Wright in the study of opsonins and vaccine therapy.

Dexterous?—The doctor who treats all his patients without the use of drugs exhibits a dexterity that reminds one of the acrobat who walks on his hands. Fine! But after all the feet do very well for walking.

Bier's Hyperemia Treatment. — The Lancet-Clinic says that once in a lifetime some great idea is born, and grows and matures. The hyperemia treatment of Bier seems to be one of these. This may be produced by a compression bandage, by suction, or by hot air. From the latter method we of America have heard much already, and now that it comes back from Germany, renamed and rehabilitated, it may be accepted as quite au fait.

The Intelligent, Persistent Advancement of Women in America is indeed one of the greatest chapters in the wonderful history of this ever remarkable country. In 1845 Elizabeth Blackwell applied to twelve medical schools before she was finally permitted to matriculate at Geneva, N. Y. We now have seven medical colleges exclusively for women, with over 1,400 students in them, and there are upward of 8,000 women physicians and surgeons practicing in the Union at the present time.

Chloroform.—The following precautions are recommended in reference to this article: Buy chloroform only in one-quarter bottles. In purchasing in larger amounts immediately transfer to small bottles. It should be perfectly dry. Keep the bottle corked tightly. Do not expose it to a bright light. Keep in a cool place. A surgeon's request for chloroform should never be filled from a partly empty package. The purest chloroform ever made would not keep indefinitely.—Medical Summary.

# THE MEDICAL FORTNIGHTLY

**Issued Tenth and Twenty-Fifth of Every Month.**

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## EDITORIAL

**The Profession and its Personal Interest in Drug Addiction.**

DR. J. A. KREIGER, of 2918 Dickson street, this city, died suddenly on July 13th. Dr. Krieger was a man of splendid education, who began practice under most happy auspices, and a career of great usefulness was predicted for him. His death explains the reason why we have heard little of him during recent years. It appears that ill health led him into the use of drugs to which he became enslaved, the withdrawal of these drugs is said to have been the cause of his demise.

It would seem that the above furnishes a text most worthy of development into a homily against the administration of morphine, cocaine and other drugs which are dangerous in their ability to enslave. Much has been said of the danger of administering these to patients except under stress of great agony, or when the patient is of such evident mental strength as to make the danger of a habit remote, but little attention has been given to the chance of the physician's dabbling therewith himself and walking to his own ruin with as little appreciation of his danger as could exist with the veriest layman. These habits are so insidious and so attractive, suffering seems so useless to one who has once experienced the relief which can be so readily gained. But each dose makes suffering, and such suffering as entirely eclipses the original. The nerves suffer drug hunger which cannot be checked except at the cost of great misery and the exercise of will power few can summon to their aid, or by the return to the drug which has occasioned it. Professional success, business standing, social esteem, the nearest and dearest of family ties, there is no relation which may not be sacrificed to these habits, and the medical profession knows it. A physician who has become addicted to any drug is a menace, for he is blind to his personal danger and can see in the drug only a beneficent agent given mankind for the elimination of suffering; his hypodermic case is his constant companion, and he uses it where a normal man would find safer medication; he takes along with him into the land of drug irresponsibility those whom he has introduced to its charms. It does seem strange that physicians, and especially physicians who are of an urban practice, should ever get into any drug addiction. Such an ever-ready clinic of the misery and hopelessness of the state is ever at hand, with its many examples of brilliancy and hope gone to wreck and ruin, that it would appear that no one need be ignorant not of the *chance* of the outcome, but of its practical *certainty*. Other physicians than Dr. Krieger have had their later days blighted, others are seeing their mistake when strength to oppose is lost, and their only hope is in the forcible intervention of others. The lesson is here, and it is in every great city, he who runs may read.

**Vale "The Weekly Medical Review."**

THE assuming of the editorial management of "Weekly Medical Review" by Dr. Kenneth W. Millican about three years since marked the beginning of a new era for that journal and for medical journalism in St. Louis. Dr. Millican brought to the Review an intimate knowledge with medicine and with journalism; his scholarly attributes, mature judgment and personality have since been devoted to its promotion, and his influence has been felt in every phase of local medical life. The growth of the journal has been beyond the growth of appreciation of it, it has not had a patronage that justified the necessary expense of its making, a weekly journal full from cover to cover with splendidly excellent matter should have numbered as its subscribers every physician in St. Louis and half those in the State, even had it cost much more than it did. It is a reflection on the profession that so tremendous worthy a venture has had to cease because of lack of living support. Every journal which is published in the middle West has the same lack of appreciation to contend with, but the expense of publication of a weekly makes this more emphatic. The Review will shortly be renewed as a monthly. Dr. Millican goes to Chicago where, we understand, he is to be connected with the Journal of the American Medical Association. The departure of Dr.

Millican is a matter the local profession should take to heart, for ours is the responsibility.

**The Glorious Fourth.**

THE annual Independence Day carnage is again a matter of history, like all other cities St. Louis has its death list and list of those who are more or less seriously injured. The lay press has had its annual post-celebration say as to the dangers of our method of celebration and the need of a radical change, but the press has offered no suggestion of a substitute for explosives as a means to noise-making. We have quieted down and resumed our normal occupations, apparently leaving next year and the future to care for itself, to be sure enactments purposing the rigid control of the sale of dangerous explosives have been introduced in various municipalities, and possibly they may become effective. The whole question is up to the American people; they like a noise, a big noise; they like to play with the fire, and the element of danger but makes it the more attractive, though it is not an essential element in the enjoyment and could be omitted. What is needed is some inventive genius who will invent a noise-maker which is easily portable and readily manipulated which is not dangerous to life and limb, make us something which is noisier than dynamite, and which is not death dealing, and the control of explosives will be readily accomplished.

The record for this year, as reported through the Associated Press on July 5th, enumerated 37 dead and 2153 injured seriously, and the report was necessarily far from complete. On the same date the Post reports that 205 were injured in St. Louis, nine fingers and thumbs were torn off; eight persons suffered severe injuries to the eyes; stray bullets struck five. Legal control of the use of explosives should be absolute at all times and especially so on a day like the Fourth, but this will never be until there is a complete change of sentiment relative to the use of explosives as noise makers: a non-explosive substitute which will make noise is absolutely needed, and a fortune waits the man who will invent it.

**Therapeutic Nihilism.**

WE have lately received for publication in the FORTNIGHTLY a paper from a physician of the old school, and it recalls the early days when the old doctor believed in his drugs, and no matter how many times they failed his faith was not shaken. These are days of pathology and bacteriology, and suggestion and of various other twentieth century advances and all to the good of the profession and laity; our schools are strengthening every modern department, and are giving anatomic, physiologic and pathologic courses that would puzzle the honor graduate of even a decade ago, but we hear little of any radical changes in the matter of materia medica and therapeutics. We believe that the weakest point in the average graduates is his unfamiliarity with drugs and the science of their compounding, some whose names are familiar he is not sure whether to prescribe as liquids or as powders. The neglect of the chairs of pharmacy and materia medica is reflected in the physician not knowing drugs, he uses them with a degree of hesitation which is but natural, and he entirely overlooks many of the agents which should be his able aids. This lack of knowledge tends to the growing therapeutic nihilism which is frequently commented upon. It is refreshing to meet with a man who believes in drugs, and speaks with certainty of what he can do with them; he may not speak the latest pathologic dialect, but if there is anything in suggestion he will certainly add that to the inherent properties of the agent he uses, and will get the double effect, for he speaks with an authority which few of us would dare to assume.

The preliminary education of medical students is generally considered the equivalent of a high school or college preparatory course, and there is talk of increasing it. The present requirement is right in so far as it goes, but in discussing an increase we would suggest that future generations of physicians would be more serviceably equipped were a diploma from a school of pharmacy preliminary to the study of medicine seriously considered rather than the proposed baculaureate degree. Turn out doctors who *know* drugs, and there will cease to be any secret remedy problem.

LEPERS TRANSPORTED.—The entire leper colony on D'Arcy Island, B. C., has been transported to China, and there are now no more known lepers in British Columbia.

THE MERGER OF MEDICAL COLLEGES has given an impetus to all local medical institutions. Considerable changes are being effected in the schools not in university affiliation. The College of Physicians and Surgeons is remodeling and equipping its pathologic and chemical laboratories on an extensive scale, and is planning considerable increase in its facilities for anatomic teaching. Plans are to give high grade work in every department and to make the school a scholastic competitor of any other school in the city.

ST. LOUIS HAS ANOTHER LEPER on its hands in Peter Argopia, an Armenian, whose residence is across the river. It is something to the credit of our Dispensary staff that the diagnosis was made, but St. Louis would have willingly have allowed the East St. Louis health authorities that glory. We have our patient and we *have* to keep him.

PROF. A. POLITZER will resign his position as head of the Vienna ear clinic this summer on account of his age. He will also cease his lectures after 46 years of service. A formal celebration has been planned, but on account of a number of deaths in his immediate family he requested that no public celebration be given.

DR. H. L. BURRELL, Boston
President-elect American Medical Association.

THE SUMMER VACATION TRIP.—The medical profession is scattered to the four winds these days seeking rest and recreation; about the usual number are in Europe, one or two have gone to the Orient, and every important recreation region of our own country and Canada has its quota. More than the usual number are staying at home and taking their vacation in a day's trips to points of interest close at hand. The Ozarks are an unexplored country to most of St. Louis, yet they are full of most delightful scenery, icy cold springs and good invigorating air; they are vastly better worth while than many resorts less accessible to St Louisans.

Preauricular pain is often caused by an alveolar inflammation.

# THE REVIEWER'S TABLE

Books, Reprints, and Instruments for this department, should be sent to the Managing Editor, Century Building, St. Louis.

PSYCHOLOGY APPLIED TO MEDICINE: INTRODUCTORY STUDIES. By David W. Wells, M. D., Lecturer in Mental Philosophy, and Assistant in Ophthalmology. Boston University Medical School, etc. Philadelphia: F. A. Davis, 1907.

This book of 136 pages deals with the fundamental elements of psychology applied to medicine in a clear and concise manner. Although the volume is theoretical to a great extent it is of a sufficient practical nature to merit an extensive sale. Nowadays, no physician can ignore the value of suggestion as a therapeutic agent in the treatment of disease, a subject to which either no space is given in text-books, or at the most, only a passing consideration. This little volume answers adequately that purpose.

PRACTICAL DIETETICS WITH REFERENCE TO DIET IN DISEASE. By Alida Frances Pattee, Graduate, Department of Household Arts, State Normal School, Framingham, Mass., etc. Fourth edition. Mount Vernon, N. Y.: A. F. Pattee, 1906.

This little volume considers the subject of diet in a most admirable manner, although the book is mainly intended for the use of nurses, the physician, especially those in rural districts will find it of inestimable value in the successful management of disease where diet plays an important factor. The first part of the book deals exhaustively with the practical aspects of dietetics, while the second part outlines the diet in relation to disease with an appendix, containing practical suggestions for the nurse in the sick room.

A TREATISE ON THE PRACTICE OF MEDICINE. For Practitioners and Students, By Arthur R. Edwards, M. D., Professor of the Principles and Practice of Medicine and Clinical Medicine in the Northwestern University Medical School, Chicago. Octavo, 1328 pages, with 101 engravings and 19 plates. Philadelphia and New York: Lea Brothers & Co., 1907. (Cloth, $5.50, net; leather, $6.50, net.)

A perusal of this excellent book shows that it is not a mere compilation of ideas cemented into book form under the guize of originality, but is an expression of careful clinical observation and wide experience. The treatise deals with the subject in a timely and comprehensive manner, and is written in such a style as to absorb the reader from beginning to end. The discussion of theoretical problems is a subordinate feature, which necessarily enhances its scope of practicability. The author's system of classification enables the reader to intelligently grasp and digest its contents, although we see no distinct advantage of discussing the epidemic form of cerebrospinal meningitis under the caption of diseases of the nervous system. Eleven sections constitute this volume, discussing respectively, Specific Infections, Diseases of the Circulation, Diseases of the Respiratory Tract, Diseases of the Digestive

Tract, Diseases of the Kidney, Diseases of the Blood, Diseases of the Ductless Glands, Constitutional Diseases, Diseases of the Nervous System, Intoxications, Sunstroke and Diseases Due to Animal Parisites. Minor criticisms could be made here and there, but on the whole, these are more than adequately compensated by the excellency of the book in general. Numerous very good illustrations and tables of differential diagnosis are given. An unusual amount of space is devoted to the treatment of diseases, together with an elaborate consideration of the physiologic action of drugs. The book contains many formulae and prescriptions which have been given a thorough trial by the author himself. All in all, this book is so eminently fine in its entirety that it is deserving of the highest commendation, and certainly worthy of ranking foremost among the standard text-books on the subject of medicine.

A MANUAL OF OBSTETRICS. By A. F. A. King, M. D. Professor of Obstetrics and Diseases of Women in the Medical Department of the George Washington University, Washington, D. C., and in the Medical Department of the University of Vermont, etc. Tenth edition, enlarged and thoroughly revised. 12mo., 688 pages, with 30 illustrations and three colored plates. Philadelphia and New York: Lea Brothers & Co., 1907. (Cloth, $2.75, net.)

King is one of the perennial books. It is now beginning its second quarter-century with its tenth edition and has thus spanned with vigor the most active and exacting period in medical history. No other obstetrical book extant has such a record. Every fact has a reason, and the ever-growing favor bestowed on King can have but one basis, namely, merit. The author combines the faculties of a teacher and practitioner, and accordingly has been able to select what is important and to present it clearly. The student thus easily acquires a grasp of everything essential, and the accoucheur can turn to these pages for reference on any point of practice. Suiting both classes of readers this single handy volume receives their combined demand, and hence goes through successive editions, enabling the author always to keep it revised to date, as he has just done again, with considerable enlargement both in text and engravings, and with the addition of colored plates.

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RECTAL FEEDING.—Rectal feeding may be carried on by means of a mixture of two eggs, twenty grains of pepsin, ten grains sodium chloride and water six ounces. This is to be slightly warmed and agitated thoroughly, and then introduced gently into the bowel by means of a glass syringe. To facilitate the entrance of the fluid into the intestines; place the patient in a position with the hips elevated above the head. Either the knee chest position or several pillows under the hips.

## CORRESPONDENCE

### A DEFINITION OF LIFE.

A review of the article by Dr. W.W. Crane under this title, which appeared in the FORTNIGHTLY of June 25,1907.

I thank you many times for the opportunity, as reader of your esteemed journal, to become acquainted with the paper written by Dr. Crane—"A Definition of Life."

The finale is forcibly recollected—a termination so startling that all that precedes, seems to be simply an introductory The definition is well enough; in accord with science, though scientists may disagree.

His differentiation of soul from spirit is good, and for the purposes of consideration of psychism must be for the present accepted as scientifically true. The term Telekinesis is excellent; it is definite, is from time to time applicable where radio-activity is not applicable, yet is expressive of the principle of incessant motion, or persistence, or determinism that is now recognized. Reasoning and reasonable to the time when he views the protoplasm, he thence instantly takes flight to Adam and Eden, pausing to refresh himself on the way at an autopsy. We are able to follow him only by a trail of quotations and citations from the Hebrew writings in the Old Testament. He appears to have been strongly impressed with the striking imagery of the plastic hand of a designing Creator moulding the form from the germ, and to assume that the same hand and mind thus pinched out Adam, and then took a bone from Adam and transmuted it into a woman.

We see here in striking degree the danger of reasoning by deduction. He leaves science, he departs from its slow but more certain course, and by hop, skip and jump lands—where?

There is not the slightest doubt in my mind that the subjective mind, which theory he well understands, and accepts, has carried him to the place where he started mentally, as the result of inheritance or early training, in Bible and pulpit legends, or both. He asserts that he reasons by deduction. Indeed, he must so state, for by deduction he has no check placed upon his course, nor in his path; he can assume and apply any assumption without let or hindrance, and those who are inclined that way will be pleased to have a leader who can speak and point for them. And thus they go, a self-satisfied band of brothers. Far above the earth, they meet no obstacle, as they wing their way.

If Dr. Crane's study is life, why does he confine hmself to man? Why does he so eagerly avail himself of the horrible disclos-

ure made by an autopsy? Do we not see his haste? Having begun his flight he picks up from the earth something, the only thing of the kind on record, and says now I will prove it to you. Aside from its definition which is a good contribution to the literature of the subject, the paper seems to be valuable, as showing ample ground for the basing of an argument that the learned writer is unconsciously moved by his subjective mind. The more clearly does this appear when we see that he is not religious, for he speaks flippantly of the drowsy preacher who puts the organ-boy to sleep. The doctor could have made them both "sit up and take notice." Speaking respectfully, if he is serious we see another of the frequent instances of a mind sane in business affairs yielding to wild vagaries and speculations on religious matters. If he is not sericus he has offered nothing but a whimsy to the reader.

As to the autopsy it is only fair to look at the record that Dr. Senn made. There must have been witnesses. Such a horrible freak! I cannot endure the contemplation of it.

Drummond failed utterly ("Natural Law in the Spiritual World"). The first half of his book was a most stirring exordium. The second half, the demonstration, seemed as though written by an inferior mind—not that he did not write it, but that he had to come to the earth to demonstrate, and could not then soar on the pinions of rhetoric. Argyll admitted away the proposition with which he started, when he was half through writing his Unity of Nature—the work fell flat. Each of these writers for a while were wonders to the world of readers. But they all did their best, according to the light that was in them, and are entitled to our gratitude.

Albert S. Ashmead, M. D.

50 Cathedral Parkway, New York.
July 10, 1907.

Drawbacks to Navy Service.—The worst drawback to the naval medical service is that the surgeon is subordinated to men younger and devoid of the scientific knowledge and tastes that render them agreeable associates to the class of physicians capable of passing the shrewd examinations at entrance. The sort of doctor who could swap yarns with a lot of youngster lately escaped from the Academy could not enter the medical corps. This has had more to do with the large number of vacancies than the meager salary —about $1,750 a year for a $10,000 man. It is a pity, for the service offers a noble opportunity for a man to whom the money is a subordinate object.

# MEDICAL PROGRESS

Comprising the Regular Contributions of the Fortnightly Department Staff.

## THERAPEUTICS.

A. C. F. BROWN, M. D.

**The Use and Abuse of Alcohol.**—The following article appeared in the St. Louis Republic of Saturday, May 25: "That St. Louis doctors are not without blame for developing a general taste for liquor was the opinion expressed by the St. Louis District of the W. C. T. U., in convention. The charge was embodied in a paper on "Medical Temperance," by Mrs. J. T. Field. A resolution was passed, requesting each member of the district to inquire of her family doctor whether he prescribes alcoholic medicines." The temperance question like the poor, we have always with us. The study of inebriety is now rapidly assuming the position of an exact science. Without a doubt the advocates of total abstinence have won great triumphs in the teeth of persistence and abuse; still their work from a scientific point of view is open to the objection that it has been carried out on a narrow basis. When we read of the strange ideas regarding alcohol enterained by the public and. we may add, some members of the profession. We are reminded of the story of the blind teaching optics, and the deaf teaching acoustics. Blackader (Montreal Med. Jour., Vol. XXXIV, No. 11) says: Alcohol in disease is a valuable food, replacing carbohydrates, and as a general rule saving proteid metabolism. It places no tax on the digestive organs; on the contrary, if used intelligently it increases their secretion, and in asthenic conditions it assists the digestion and favors absorption of other foods. Eaton (Provincial Med. Jour., Eng.) an English writer sums up the legitimate use of alcoholic stimulants as follows: It should always and only be used in conjunction with food. In the treatment of disease it is safest when left to the judgment of the physician. It should never be prescribed except in extremely enfeebled conditions, attended with imminent risk of failure of the vital powers, or when other stimulant cannot act so effectively, and should always be ordered in definite doses for a limited period, as are other medicines. As to the use of alcohol even in disease, the majority of the profession believe it a most useful agent. Flint (Journal Dietetics) advocates it in fevers, on the ground that it supplies material for consumption in place of the tissues. That intrepid Arctic explorer, Gen. Greely of the U. S. Army, once said: "That while at Cape Sabine alcohol was freely

discussed, and all, without one exception fully agreed in the opinion, that alcohol should be taken after the day's work was over, and not before or doing exhausting labor, nor while suffering from exposure. Later when the supply of food was so diminished as to necessitate a greater reduction of rations, the pure alcohol on hand was issued as food, diluted by three times its weight of water. The general impression was that alcohol supplemented food and had a decided alimentary value."

**The New Anesthetic, Alypin.**—This preparation introduced to the profession by Bayer & Co. is a white crystalline powder, neutral in action and freely soluble in water. In its effect it resembles cocaine. A one per cent solution produces profound anesthesia of the rabbit's cornea in about forty to fifty seconds. The fatal dose in the lower animals is twice that of cocaine. It is non-poisonous, and is a pure local anesthetic. Stephenson in the Ophthalmoscope, Vol. III, No. 11, reports that he has used it in a two per cent solution in over 20 cases. There is a slight irritation when applied to the conjunctival sac, but this is not so marked as with cocaine. In about one minute the conjunctiva and cornea is insensitive to the touch, and a little later can be readily taken up with forceps, and the patient not noticing or experiencing any pain whatever, usually there is some dilatation of the superficial vessels, but not the pupil, accommodation is not interfered with.

**Treatment of Uremic Coma.**—As this condition is due to deleterious substances in the blood, the most important point to observe in the treatment is the promotion of elimination. And as the kidneys are crippled we must look to the increased action of the skin and bowels, as the channels through which rapid elimination is to be carried on. Diaphoresis and catharsis therefore must be increased. The free action of the skin must be promoted by means of hot packs, hot air, or vapor baths. In general practice the hot pack is the most suitable and easily emphasized. The patient is to be placed on a bed protected by a rubber sheet after removing all clothing. Blankets wrung out in hot water about the temperature of 110 degrees F., wrap one around each limb, and one around the body. Over these place a dry blanket and allow the patient to remain at least one hour. During this procedure an ice cap should be placed to the head, thus avoiding cerebral congestion. A narrow salt solution injected hypodermically into the cellular tissue is of great importance, being of great aid to elimination as well as to the overworked heart. A pint may be injected at one time. If it is not convenient to administer it this way, large amounts may be injected per rectum. To meet the second indication, namely, elimination by the bowels, free catharsis is most rapidly produced by croton oil; this can be given in one or two minim doses dropped on the base of the tongue, administered in a teaspoonful of olive oil, or on a lump of sugar. Elaterium in $\frac{1}{4}$ grain doses, according to Hirst, in a little butter with which it is well mixed will usually produce the efficient purging necessary in these cases. The number of doses should not be limited to three, but continued long enough that the desired effect is produced. Pilocarpine to produce diaphoresis is inappropriate on account of its depressing effect on the heart. Where there is such work thrown upon the organ by congestion of the pulmonary route, or when the heart begins to succumb to the poisonous effect of the toxins it can be relieved by venesection, which is seldom resorted to as often as it should be under such circumstances, and phlebotomy should be done as a preventative measure before marked pulmonary edema comes on. Frequently nitroglycerine is a good susbtitute for venesection, as the principal action of the nitrites is to dilute the peripheral blood vessels, and in that way they greatly reduce the amount of work thrown upon the heart. Alternating with nitroglycerine digitalis may be given, if the pulse is weak, in moderate doses, providing there is no fatty degeneration of that organ present. Caffeine in uremia is an excellent heart tonic as well as diuretic. Strychinine, either hypodermically or by the mouth in doses from 1-20 to 1-10 grain, followed by digitalis, gtts. 20 is given for the support of respiration. Should convulsions appear or threaten they can be avoided by giving a rectal enema of

℞ Chloral..... gr. xx
Sodii bromidi..... gr. lx
Starch water..... ℥vi
M. Sig.: Use as directed.

**Therapeutics of Cholera Infantum.**—The types of disturbances of the alimentary tract that prevail in our cities during the summer months are modified by three factors: Food, climate and social environment. Treatment in the main consists of (1) absolute cessation of all food for twenty-four hours. (2) Pure cold water freely given, heat to the feet, stimulants to the abdomen, and cold to the head. Intestinal antiseptics, as calomel, salol, bismuth, soda bicarb., opiates only when indicated. The odor of the stools determines the general class of fermentation, but all attempts to disinfect the intestinal canal by medicine

have been disappointing. Lemonade, barley water or albumen water are pleasant and refreshing. Crush coffee is also beneficial. Medicinal treatment begins and ends with elimination. On the empty stomach give calomel and soda bicarb., in small doses, $\frac{1}{8}$ gr. calomel to gr. 1 of soda, this can be given every hour until eight are taken. Irrigation of the large bowel not only removes the fermenting substances, but cleanses the mucosa. With the presistent vomiting and frequent purging. Irrigation of the stomach, and if fever is high ice water injections, or a bath gradually reduced. In conditions of extreme vomiting and purging, and when collapse seems inevitable opium is our sheet anchor; this may be given in doses from 1-125 to 1-100 gr., which may be repeated in an hour, if necessary. When the distressing symptom of vomiting has stopped mercury in form of the Gray powder $\frac{1}{2}$ gr. in combination with Dover's powder 1-10 gr. Enemas of starch water and laudanum are of great benefit in quieting and soothing if retained. When collapse is extreme hypodermic injections of a one per cent saline solution may be used, and brandy and ether can be tried. Withhold milk for several days, but when used it should be diluted and thoroughly peptonized.

## OTOLOGY.

ALBERT F. KOETTER, M, D.

**Caries of the Horizontal Semi-circular Canal in Connection with Unusual Clinical Appearances.**—(Török, Budapest, Archiv fuer Ohrenheilkunde.)—Patient of 21, suppurative ear since childhood following scarlatina. There appeared nausea, vomiting and severe dizziness, so that patient could walk only with aid of cane. There was abundant fetid discharge, drooping of posterior superior wall of canal, pain on pressure and swelling over mastoid. No fever, no meningeal symptoms. In closing eyes patient fell backward toward the healthy side, active nystagmus which increased in looking toward healthy side. Besides this in examining for nystagmus a peculiar eye symptom was noticed. In requesting patient to fix eyes on a finger held up both eyes suddenly made a rapid, greatly converging movement, remained in that position a few seconds and resumed with oscillating movements their old position. This symptom appeared in all experiments, although only in fixation within a certain distance ($1\frac{1}{2}$ meters), viz., in stronger innervation of the internus muscles. At the operation besides an extensive cholesteatomatous process, a fistula of the semicircular canal at its greater curvature, from which sprang granulation tissue, the bony edges were of a grayish black color. A day after the operation the eye symptom could not be demonstrated, nausea and vomiting disappeared and only a minimum amount of vertigo was present.

**Mastoiditis and Furunculosis.**—(E. Delstauche, La Presse Oto-Laryngologique.) It may occur that diagnosis between these two affections is difficult. Delstanche reports two cases from which he infers that in doubtful cases Wilde's operation should be performed. This always affords relief, and in case of cellulitis or subperiosteal abscess lead to recovery, and also allows one to ascertain condition of mastoid process.

**Indications for Bier's Aspiration Method in Oto-Laryngology.**—(F. Guyot, La Clinique.) praises the method with Soudermann's aspirator. (1) For the ear: (a) to empty middle ear after paracentesis, instead of using Politzer's air douche, which has certain defects; (b) to remove suppurative products several times daily. (2) For the nose and accessory cavities: (a) for diagnosis of sinus suppurations; (b) treatment of acute sinus suppurations; (c) treatment of suppurative rhinitis in children; (d) as modifier of the nasal mucous membrane in ozena.

**The Peripheral Facial Paralysis and Its Treatment.**—(Alfred Fuchs, Vienna.)—After a resumé as to the difference in the symptoms of nuclear and infranuclear from the supranuclear affection of the facial course, Fuchs turns to diseases of the already formed facial nerve, reporting some 600 cases seen in ten years. On the basis of anatomy and physiology the pathology, and especially the symptomatology is treated in detail, which in order to be appreciated must be read in the original article. It is of interest that of 93 cases in which the etiology could be ascertained, 43 appeared in connection with disease of the ear. In his cases he could find no rule in the relation of the severity of the ear affection to the severity of the facial paralysis, and also claims lack of information in the statistics. The chapter on electro-diagnosis is short and concise, the therapeutic part showing some new praiseworthy work. The operative treatment, the application of anastomoses between facial and accessory nerves; further between facial and hypoglossal or individual branches of the glosso-pharyngeal nerve are discussed by him. He is not a great admirer of these procedures, or the results obtained, and does not advise them, unless it has been absolutely proven that the paralysis is incurable, and has existed at least a year

**The Treatment of Chronic Middle Ear Catarrh.**—(E. Urbantschitsch, Klinische-therapeutische Wochenschrift.)—The article is intended mainly for the general practitioner, great stress is therefore laid on the therapy. Urbantschitsch speaks of the early treatment to combat the catarrh which has so far only involved, the tubes; air inflation, bougie and massage of the tubes. Where catarrh has involved the tympanic cavity author recommends as main remedy massage and electricity. In massage he differentiates between manual or mechanical vibration and percussion massage of the external ear, vibration and friction massage of the tube, pneumo and probe pressure massage of membrane and ossicles; furthermore he uses extensively and in oft-repeated applications, faradization and galvanization, this with extended and internal application (catalytic method), and lastly Franklinization. Urbantschitsch praises subcutaneous fibrolysin injection 0.3, 2.0, 3.0 per dose; where he finds improvement it is repeated twenty to fifty times, besides his energetic treatment to mobilize the chain of ossicles. A separation of adhesive processes and sclerosis author does not attempt the above methods are practiced regularly in these cases and with apparent optimistic results.

**General Septic Infection Originating in the Ear.**—W. Kümmel (Grenzgebiet fuer Medicin and Chirurgie) reports history of twelve cases. In the classification he agrees with Körner Enlenstein division: pyemic and septic course, but agrees with Körner that a sharp division of the two forms is impossible. A resumé of his cases, leads to the following conclusions: The majority of patients are the young, the phlebitiden more often on the right (agrees with Körner). The ear suppuration was of different types; acute recurring, intermittent and chronic. Of the twelve four were fatal. As a contribution to the symptomatology Kümmel mentions pain in swallowing. This he thinks is due to neuritis or perineuritis of the nerve branches passing through the jugular foramen, especially the glosso-pharyngeal demonstrated microscopically in an earlier case). In pure sinus phlebitis this symptom does not appear, bulbus disease would also be absent. It is only, when positive, of importance. Pain on pressure along course of jugular must not be judged hastily, as this may also be caused by enlargement of the glands, nevertheless this symptom is important. The temperature of the body, although important does not offer any solution as to where the toxic resorption has occurred, even though the fever type may give important information. For instance, a chill might indicate a sudden flooding of the body with infectious material, viz., the loosening of an infected thrombus of considerable size. Therapeutically a definite course cannot be prescribed. Opening of the mastoid and its cavities is necessary in all cases. If disease process extends to cerebral sinus, its walls should be exposed to detect its condition. But normal condition of the wall does not indicate normal contents it is therefore nearly always necessary to open the sinus extensively. Previous to this compression of the sinus, according to Meier Withing, should be performed. If a thrombus is found in the sinus it should be traced to its end, and if disintegrated the sinus should be opened wide until blood flows. Solid thrombi should, if possible, be removed. At any rate the sinus should be cleared as far as the wall seems diseased. We should not be satisfied to go forward to the bulbus, but the sinus should be opened backwards extensively. If the disease extends beyond the bulbus it is recommended occasionally to attack the jugular. But if this occurs but once, there would be no sense in simply ligating, but it should be exposed and opened. If no thrombus is found in the sinus and a septic condition is indicated, it is better after opening the original inflammatory focus in the bone and middle ear, not to interfere and use the collargol treatment. The pyemic course demands, even though the sinus is not thrombosed, opening of the bulbus and vena jugularis, at least the latter to exclude it from the circulation.

## INTERNAL MEDICINE.

O. E. LADEMANN, M. D.

**The Therapeutics of Bright's Disease Based Upon Its Etiology.**—Porter (Amer. Med., June, 1907) says that under the common term Bright's disease there are three general classes to be considered: First, one in which the pathologic changes are confined largely to the epithelial elements constituting the renal structures, and classed as a parenchymatous lesion. Second, one in which the major lesion is located between the tubules, in the form of a more or less abundant production of newly formed connective tissue substance, and classed as an interstitial lesion. Third, one in which the epithelial and connective tissue elements are more or less equally rendered pathologic and classed as a diffuse lesion. The author differentiates thirteen different renal lesions in a comparative table, showing the urinary changes. In order to intelligently treat Bright's disease it is neces-

sary to have a full understanding of the etiologic factors which the author's article fully embraces. He considers the therapy under two common headings; first, that of prevention, and second, that which is applicable after positive development of the renal lesion. The following are the writer's deductions: 1. All therapeutics to be scientific, must have for the primary object the removal of the causative factors that are producing the pathologic conditions. There are three general subdivisions of the renal lesions classed as "Bright's." 3. Each of these is further subdivisible, both from a pathologic and clinical standpoint. 4. Hemorrhagic nephritis as such does not exist. 5. The so-called hemorrhagic nephritis is an occasional modification of the chronic parenchymatous change. 6. Most renal lesions are non-inflammatory processes. 7 Most renal lesions are due to overwork of these glands at a time when the nutrition is impaired. 8. The one exception is in connection with the class known as an exudative or inflammatory process. Here all the phenomenon of a true inflammation exists. 9. There are three well defined causative factors which enter into the production of the parenchymatous group of lesions. 10. These three factors, plus five others, enter into the production of the interstitial and diffuse group of lesions. 11. Both the overuse and defective supply of starches, sugars and fats are important factors to be considered in the production, maintenance, and cure of these renal lesions. 12. Nervous overstrain is an important factor which often acts indirectly in exciting and maintaining renal affections. 13. Treatment is to be directed both to prevent and to cure. 14. Treatment consists chiefly in the correct apprehension and removal of the causative factors. 15. The successful management of this class of pathologic lesions calls for an extensive and thorough knowledge of chemicopathology and dietetics. 16. Drugs are not in any sense curative; but when rightly used can be made to produce wonderful results by enabling nature to utilize successfully the natural food substances; thus nature can be made both to remove the cause and repair the damage. 17. These renal lesions when studied purely from the histologic standpoint are incurable. 18. Considered from the physiologic and chemical standpoint, a large per cent are curable. 19. Viewed from the standard it is difficult to see how surgical interference can, even in a limited degree, be made to remove the underlying factors, hence such measures cannot be classed as scientific.

**The Use of Tuberculin in the Early Diagnosis of Tuberculosis.**—Hawes and Floyd (Boston Medical and Surgical Jour., May 30, 1907) base their remarks on a study of thirty-seven cases. They hold that tuberculin is an agent of great value in the early diagnosis of tuberculosis. It should be used only as a last resort. It should be used only in carefully selected cases. It should be given by men trained and qualified to do the work. When so used, in an initial dose of not over 0.1 mg. it is not in any way dangerous.

**A Simple Test of Differentiating Tuberculous from Other Pus.**—Kolaczek and Müller (Deutsche Medizinische Wochenschrift, No. 17, 1907) claim to have discovered a simple test for the rapid differentiation of pus which depends on the different chemical reactions of Millon's solution to pus of different origin. Millon's reagent is made of 10 gm. of mercury and 20 c.c. of nitric acid diluted with an equal volume of water and decanted after standing twenty-four hours. A moderately deep small china dish is filled with the above reagent and a drop of the pus to be tested is deposited in the center of the surface. Should the pus be of a tuberculous nature a solid film forms over the surface of the solution while the color of the underlying solution remains unchanged. Should the pus be of another origin no film forms and the fluid turns a bright red.

**The Pretuberculous Stage of Pulmonary Tuberculosis.**—Galbraith (The Practitioner, June, 1907) considers at length the earlier signs of pulmonary tuberculosis. He lays emphasis on the following points: The early physical signs of pulmonary tuberculosis do not correspond with the commencement of the disease. For a prolonged period, previous to diagnosis, the disease is advancing from a small deep-seated lesion and causing a toxemic condition, sitting up various symptoms, and modifying the course of intercurrent diseases. The variety and continuance of these symptoms constitute a clinical picture, which, when recognized by experience, should suggest the possibility of latent tuberculosis. Various methods, clinical and scientific, are available for rendering the diagnosis more certain. In cases in which a tentative diagnosis is followed by appropriate treatment, the results justify the course adopted.

**The Early or Premonitory Symptoms of Pernicious Anemia.**—Lichty (Jour. A. M.A., June 29, 1907) says pernicious anemia is the result of a toxemia. The symptoms and course of the diseases are clearly in accord with this, and the study of the bothriocephalus anemias permits scarcely any other conclusion. What the exact nature of this toxin is is still a matter of speculation and

doubt. It is generally agreed, however, that its origin is somewhere in the alimentary canal. The characteristic blood picture, such as high color index, megaloblast, megalocytes, poikilocytes and leucopenia is not the cause of the symptoms which may have preceded it or which followed, but is simply a part of the symptom-complex of pernicious anemia. In spite of what has been said to the contrary, the author holds that achylia gastrica is closely related to pernicious anemia. Of the twenty cases which have come under his observation fourteen presented achylia gastrica and its associated diarrhea. The writer details the history of four cases, and briefly summarizes the twenty cases on which he bases his papers. They occurred among about 7,300 patients seen in general medical and consulting practice. The average age was 55 years, the youngest being 27 years, and the oldest 80 years. Eleven were males and nine females. All cases had at some time an achylia gastrica. Fourteen had remission varying from a few months to five or six years. The spleen was enlarged in three cases. Seventeen have died. In only two were autopsies made. The autopsies were noted for the absence of positive lesions. The treatment followed was based on the necessity of rest, fresh air, abundance of nutritious food, a rational consideration of the gastro-intestinal symptoms, and the almost marvelous effect of arsenic. When arsenic could not be taken by the mouth, the hypodermic use was not followed with favorable results. When the gastro-intestinal symptoms could not be controlled, the administration of arsenic was useless and even harmful at times.

**An Atypical Case of Anemia.**—Frederick's (Jour. A.M.A., June 27, 1907) case offers the following peculiarities. That it was a case of pernicious anemia from the appearance of the blood. It was a splenic leukemia from the physical signs. It did not react beneficially to arsenic or iron. It was cured under or coincidentally with the treatment with nucleinic acid. It was not typical of either form of anemia in recovering.

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Do not exclude the diagnosis of extrauterine pregnancy merely because vaginal examination reveals no mass in the pelvis.

A DISASTROUS fire recently destroyed the Medical Museum and Library at McGill University, Montreal. This was one of the finest on this Continent and, although the loss is partially covered by insurance, yet it will be difficult to replace many of the valuble articles lost by the fire.

A PLAN to hold an international conference on opium is attracting a good deal of attention, and it seems quite probable that such a conference will be held and the United States, China, Japan, England, Holland, Germany and France will participate.

MEDICAL SOCIETY OF THE MISSOURI VALLEY.—The annual meeting of this association will be held in Council Bluffs, Iowa, on Thursday and Friday, September 5 and 6, 1907, under the presidency of Dr. O. Beverly Campbell, of St. Joseph. The fall meeting of this society are always interesting and largely attended; Dr. Donald Macrae is chairman of the Arrangement Committee, which insures a pleasant time for those who attend. Papers are solicited, and will be placed on the program in the order in which they are received. Contributions from internists especially desired. Send titles to the secretary, Dr. Chas. Wood Fassett, St. Joseph, Mo.

THE ASSOCIATION OF AMERICAN TEACHERS OF DISEASES OF CHILDREN.—A meeting of professors of pediatrics and hospital clinicians in that branch was held at the Marlborough-Blenheim, Atlantic City, June 3d. Many of the best known pediatricians of this country were present. A very successful meeting was held, and a permanent organization was effected which bears the name "The Association of American Teachers of the Diseases of Children." Professors, associate professors and lecturers in medical colleges of the United States, Canada and Mexico are eligible. Also hospital and dispensary staff members actively engaged in treating children. The principal objects of the organization are to advance the study of children and their diseases and raise the standard of the teaching of pediatrics in medical colleges and its practice in hospitals, dispensaries and private practice. The association elected the following officers: President, Dr. Samuel W. Kelley, Professor Diseases of Children, Cleveland College of Physicians and Surgeons, Medical Department of Ohio Wesleyan University; vice-president, Dr. Charles Douglas, Professor Diseases of Children and Clinical Medicine, Detroit College of Medicine; secretary, Dr. John C. Cook, Professor Diseases of Children, Post-Graduate Medical School and Hosptial of Chicago; treasurer, Dr. George H. Cattermole, Professor Diseases of Children, Colorado School of Medicine. Senators, Dr. W. C. Hollopeter, Professor Diseases of Children, Medico-Chirurgical College of Philadelphia; Dr. H. M. McClanahan, Professor Diseases of Children, University of Nebraska College of Medicine, Omaha; Dr. R. B. Gilbert, Professor Diseases of Children, Louisville University, Medical Department.

## CLINICAL THERAPEUTICS

A forum of original experience, to which scientific contributions are invited. Responsibility for views promulgated limited to author.

### CACTUS IN FUNCTIONAL HEART AFFECTIONS.

W. T. MARRS, M. D.

PEORIA HEIGHTS, ILL.

THE therapeutic product of the cactus grandiflorus is growing more and more popular with the profession in cardiac affections, particularly those that are functional in character. The active principle of cactus is a resinous substance which is quite soluble in alcohol, but is rather unstable in solutions. Cactus has no cumulative effect like digitalis. It is not a substitute for digitalis as a vasomotor agent, but giving tone to the heart muscle in most conditions cactus is to be preferred. Neither does cactus produce irritation of the heart muscle like strophanthus. The action of cactus is about as follows:

The musculo-motor energy of the heart is strengthened, arterial tension is raised and the force of the pulse wave is increased. This is accomplished mainly through stimulation of the nerve centers presiding over these functions. The contractile power of the heart is increased and careful observers state that the nutrition of this muscular organ is improved. The effect upon the nervous system is pleasant, while no untoward symptoms, immediate or remote, have been reported from this agent when given physiologically. Rubini, of Naples, who introduced cactus, states that its sedative action is like that of aconite, except that the former drug gives strength and tone to the nerve centers.

The indications for cactus are these: Functional heart affections and progressive valvular insufficiency. I find that especially in cases of neurasthenic men and hysterical women where lack of nerve tone so often centers about the heart we have in cactus an ideal remedy. These patients have a weak circulation, their skin is usually clammy and their feet are always cold. Cactus relieves the condition and causes no gastric irritation or unpleasant symptoms. I have found also that in persons of irregular habits, excessive sexual indulgence, too much coffee, and other conditions that superinduce wrong heart action, in this remedy we have a most valuable corrective. In fact in all run-down and debilitated conditions it serves a useful purpose. I regard cactus as possessing a two-fold action—a heart-corrective and nerve-sedative.

The best results from this agent are obtained from small doses given frequently. Even small doses exert an influence upon the heart and nervous system. Of late I have abandoned the use of the tincture and fluid extract, and have been using cactina pillets and I find they are quite dependable. Each contains 1-100 grain, and one of these may be given every hour or so until results. As I stated in the beginning, this remedy is gaining a well-deserved popularity from physicians of all schools. The homeopaths first employed it, next the eclectics tested it and found it to possess merit and now physicians everywhere are giving it a favorable consideration. Its benign effects, together with its therapeutic certainty, will probably cause it in the future to be prescribed oftener than some drugs whose action is less certain.

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MEDICAL BOARD NAMED.—The New York State Board of Regents has appointed the following State Board of Medical Examiners, as provided for by the law recently passed by the Legislature: Drs. William W. Potter, Buffalo; William S. Ely, Rochester; Eugene Beach, Gloversville; Floyd M. Crandall, New York City, of the regular school; Drs. Frank W. Adriance, Elmira; Floyd S. Farnsworth, Plattsburg, and W. S. Searle, Brooklyn, of the homeopathic school; Dr. Lee H. Smith, Buffalo, of the eclectic school, and Ralph H. Winchester, Rochester, osteopath.

OBLITERATING TATTOO MARKS.—This was the subject of a report made by M. Variot, before the Societe Medicale des Hopitaux, of Paris. One was a man who had the figure of a naked female tattooed on his forearm and on the posterior surface another figure. The man found difficulty in gaining employment, and for this reason was anxious to be relieved of his impedimenta. Variot resorted to cauterization by means of tannin and silver nitrate. A bundle of needles was used to pierce the skin just as deep as the needles which did the tattooing, and thus the tannin and silver nitrate was enabled to pierce the layer where the pigment for tattooing was deposited. Two months after the termination of the treatment one could see only a slightly pigmented scar, brownish in color and not very conspicuous. The skin of the region was soft and moved readily over the aponeurosis. Another method was suggested, viz., the application of blistering agent which had to be done repeatedly. The ideal method, however, was by electrolysis, which destroyed the tattooing very rapidly and left practically no scar.—Health.

## FAVORITE PRESCRIPTIONS

INFANTILE CONVULSIONS.—

℞ Chloralis.....
Potassii bromidi..... gr. xv
Syr. codein..... gtts x
Tr. moschi.....
Tr. aconiti.....aa gtts x
Aqua auranti, q. s. ad..... ℥ij

M. Sig.: Teaspoonful doses, or by enema if it cannot be taken by the mouth.

FACIAL ERYSIPELAS.—W. F. Rodue in the Surgical Clinic recommends the following combination in the treatment of facial erysipas:

℞ Ichthyol..... ℥ij
Etheris..... ℥j
Collodii..... ℥j

M. Sig.: Apply locally with camel's hair brush several times daily.

According to the author this solution checks the spread of the disease, and quickly relieves the pain. In those individuals who are asthenic he gives tinct. of ferric chlorid internally and in suppurative cases calcium sulphid.

The following containing lead and opium is a common remedy, which acts efficiently in some cases:

℞ Plumbi acetatis..... ℥j
Tinct. opii..... ℥j
Aqua, q.s.ad..... Oj

M. Sig. Shake bottle and apply on lint saturated thoroughly with the solution.—Merck's Archives.

URTICARIA.—Balzer, according to the Internat. Med. Mag., has found that a solution of menthol, thymol and carbolic acid is of service as a local application in the treatment of this disease. He either employs them in a two per cent solution in alcohol or aromatic vinegar, or in combination, as follows:

℞ Acidi thymici..... gr. xv
Acidi phenici..... gr. xxx
Alcoholis..... ℥vj

M. Sig.: Apply locally.

When the eruption is persistent and a prolonged treatment is required, he prescribes it in the form of an ointment. In urticaria caused by contact with insects he has found the application of ichthyol the most useful preparation. The treatment, however, must not be entirely local, but the careful regulation of diet and attention to the digestive tract is of equal importance.

INSOMNIA WITH EXCITEMENT.—

℞ Hyoscain hydrobrom..... gr. ss
Tinct. aurant..... ℥j
Aqua destill..... ℥iij

M. Sig.: ℥j at bedtime.

VOMITING OF PREGNANCY.—Barr recommends the following in the vomiting of pregnancy:

℞ Bismuthi subnitratis..... ℥ij
Pepsini sacchari..... ℥j
Sodii bicarb..... ℥ss
Sacch. lactis..... ℥j

M. Ft. chart No. xii. Sig.: One powder every three hours.

In addition he gives the following:

℞ Acidi nitro-hydrochlor. dil..... ℥iss
Spts. limonis..... ℥j
Syr. simplicis..... ℥ij

M. Sig.: One teaspoonful in a wineglass of ice water three times daily.

FOR TYMPANITES IN INFANTS.—

℞ Sodii sulphocarbolatis..... gr. v
Syr. aurant..... ℥iss
Aqua. menth. pip..... ℥vi

M. Sig.: One scant teaspoonful three times daily.—Jour. A. M. A.

To make one quart solution of carbolic acid in the strength:

| | ℥ | ℥ | *m* |
|---|---|---|---|
| 1-20 | 1 | 4 | 50 |
| 1-30 | 1 | 0 | 30 |
| 1-40 | — | 6 | 30 |
| 1-50 | — | 5 | 0 |
| 1-60 | — | 4 | 15 |
| 1-70 | — | 3 | 40 |
| 1-80 | — | 3 | 10 |

TO CHANGE APOTHECARIES, WEIGHTS OR MEASURES INTO METRIC.—To change grains or minims into grams or fluid grams, divide by 15. To change drachms or fluid drachms into grams or fluid grams, multiply by 4. To change ounces or fluid ounces into grams or fluid grams, multiply by 32.

RULES FOR CHANGING METRIC WEIGHTS AND MEASURES INTO APOTHECARIES.—To change grams and grams into grains and minims, multiply by 15. To change grams or fluid grams into drachms divide by 4. To change grams or fluid grams into ounces divide by 32.

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EL PASO, TEXAS, is up in arms against the wholesale influx of tuberculous patients within its gates. It calls physicians who send their patients there "unscrupulous or ill-informed." The El Paso Herald said recently: "If some means could be devised to procure the establishing here of a heavily endowed sanitarium, which would take care of all patients offering themselves, free if unable to pay, but for pay in proportion to ability, then El Paso could well afford to give such an institution all due co-operation."

# THE MEDICAL FORTNIGHTLY

**A Cosmopolitan Biweekly for the General Practitioner**

The Medical Fortnightly is devoted to the progress of the Practice and Science of Medicine and Surgery. Its aim is to present topics of interest and importance to physicians, and to this end, in addition to a well-selected corps of Department Editors, it has secured correspondents in the leading medical centers of Europe and America. Contributions of a scientific nature. and original in character, solicited. News of Societies, and of interesting medical topics, cordially invited.

Advertising forms close on the first and fifteenth of each month. Time should be allowed to submit proof for correction Advertising rates on application.

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The Medical Fortnightly will not be discontinued at expiration of ubscription, as many of our readers prefer not to have their files broken on account of failure to remit. Unless we receive a distinct request to discontinue, and payment for all arrearages, this magazine will not be discontinued.

Subscriptions may begin at any time; volumes end with June and December.

Contributors should understand that corrected typewritten copy is essential to clean proof and prompt publication, and is much more satisfactory than manuscript. Original articles should be as condensed as justice to the subject will allow.

Editorial offices in St. Louis and St. Joseph, where specimen copies may be obtained, and subscriptions will be received.

Contributions and books for review should be addressed to the Managing Editor, 319 and 320 Century Building, St. Louis, Mo.


## A POPULAR SEASIDE RESORT.

Ocean City, New Jersey, is one of the newer resorts along the famous Jersey coast, but it is growing in popularity each year. The magnificent beach, splendid drives, beautiful bay, in which small craft of all kinds may sail in perfect safety, good hotels, and summer cottages, all combine to make this an ideal spot in which to spend the season with one's family. Being only 65 miles from Philadelphia, and connected with Atlantic City by an excellent trolley line, giving fifteen-minute service, Ocean City is in close touch with the world, and business men are appreciating the advantages to be found here by erecting scores of beautiful homes. In South Ocean City, particularly, many fine cottages have been erected in the last few years. Your representative found among the summer residents of this thriving little city, Dr. and Mrs. L. J. Ellinger of Philadelphia—Dr. Ellinger having formerly resided in St. Louis; Dr. J. J. Taylor, editor of the Medical Council, Philadelphia, occupies a pretty home on the beach, with his wife and children; and his next door neighbor is Dr. J. Guy Moni han, managing editor of the Medical Examiner and Practitioner. Mrs. Monihan and and three promising sons comprise the happy Monihan family, and fine sport they have on the beach, which spreads away from their front doorway to the rolling tide of the great Atlantic.

Ocean City boasts of a large number of good hotels, the most popular and largest being the Cumberland, under the management of Mr. Edward K. Cake, who is making a reputation for his house. Many improvements have been added this season, and the Cumberland is now up-to-date in every respect, and filled with an excellent class of guests. The semi-weekly hops in the ballroom are largely attended, and much enjoyed by the younger set that is summering here.

In a few days automobile service will be established between Ocean City and Cape May, for the benefit of guests of the Cumberland and of the Stockton hotel, at Cape May, which is managed by Mr. H. S. Cake, and is one of the finest hostelries in that famous resort. By this arrangement the guests of these two hotels may become acquainted with one another, and spend many pleasant days exchanging visits. The automobile road is an ideal one, through pretty stretches of woodland, and thriving little villages, the run being made in one hour and a half.

Ocean City has a splendid city government, headed by a capable business man, Mr. Joseph G. Champion; excellent streets, good train service, many churches, of all denominations, a large auditorium, where services are held throughout the season by some the most noted divines of the country. In short, it is an ideal resort for those who wish to forget their cares and business worries, and get back to nature for a season. The surf bathing is unsurpassed at this point. In fact, we are so contented here that home has been all but forgotten in the charms of Ocean City.

There are no saloons in Ocean City, which fact adds greatly to its desirability as a family resort. CHAS. WOOD FASSETT.

DOUBLE FEES ON SUNDAY.—The French Congress of Practitioners declared its approval of the plan to charge double rates for professional calls made on Sunday. This plan has already been adopted in the Lyons district, the public having been notified to this effect by the local medical society.